

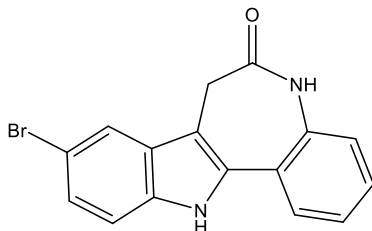
Catalog #10-3028

Kenpaullone

142273-20-9

9-Bromo-7,12-dihydro-indolo[3,2-d]benzazepine-6(5H-one; NSC 664704

Lot # X109293



Kenpaullone (142273-20-9) inhibits GSK-3 β (IC₅₀=0.23 μ M) as well as several cyclin-dependent kinases (CDKs), IC₅₀=0.4, 0.68 and 0.85 μ M for cdk1, cdk2 and cdk5 respectively.¹⁻³ Induces pluripotent stem cells from somatic cells⁴ and increases direct neural conversion of human fibroblasts⁵ when used with other small molecules. Inhibits Kruppel-Like Factor 4 (KLF4) reducing autoimmune arthritis in the collagen-induced arthritis mouse model.⁶

References/Citations:

- 1) Zaharevitz *et al.* (1999), *Discovery and initial characterization of the paullones, a novel class of small-molecule inhibitors of cyclin-dependent kinases*; *Cancer Res.* **59** 2566
- 2) Schultz *et al.* (1999) *Paullones, a series of cyclin-dependent kinase inhibitor: synthesis, evaluation of CDK1/cyclin B inhibition, and in vitro antitumor activity*; *J.Med.Chem.* **42** 2909
- 3) Bain *et al.* (2003), *The specificities of protein kinase inhibitors: an update*; *Biochem. J.* **371(Pt. 1)** 199
- 4) Lyssiotis *et al.* (2009) *Reprogramming of murine fibroblasts to induced pluripotent stem cells with chemical complementation of Klf4*; *Proc. Natl. Acad. Sci. USA* **106** 8912
- 5) Pfisterer *et al.* (2016), *Small molecules increase direct neural conversion of human fibroblasts*; *Sci. Rep.* **6** 38290
- 6) Choi *et al.* (2018), *Kruppel-Like Factor 4 Positively Regulates Autoimmune Arthritis in Mouse Models and Rheumatoid Arthritis in Patients via Modulating Cell Survival and Inflammation Factors of Fibroblast-Like Synoviocyte*; *Front. Immunol.* **9** 1339

PHYSICAL DATA

Molecular Weight:	327.18
Molecular Formula:	C ₁₆ H ₁₁ BrN ₂ O
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (35 mg/mL)
Physical Description:	Beige solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

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